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[No. 8.]

Notes on *Spartina*.

By F. LAMSON SCRIBNER.

(Plate xxxvi.)

Mr. Bentham, in his revision of the genera of Gramineæ, has removed *Spartina* from Chlorideæ and placed it in the Chamæraphis group of Paniceæ, associating it with the foreign genera *Chamæraphis* and *Xerochloa* of Brown and with *Stenotaphrum*, Trin., represented in the Southern States by *S. Americanum*, Schrank. The student whose observations are confined to American grasses will see little in common between *Spartina* and *Penesetum* or *Stenotaphrum*, the former immediately preceeding and the latter following it; and he will be little inclined to accept this new arrangement as one that is at all *natural*. He will continue to feel that the relations of *Spartina* are with the Chlorideæ, a tribe in which it has heretofore been placed, and allow the fact of the articulation of the pedicels below the outer glumes as an exceptional character in this genus, as it is allowed in some others which are included in Poaceæ.

In defining the *Chamæraphis* group Mr. Bentham states that the spikelets are nearly those of *Panicum*, but with the fruiting-glume usually less hardened; the inflorescence is nearly that of the paspaloid *Panica* or of Chlorideæ, but distinguished from the former by the rhachis of the partial spikes or fascicles or branches of the panicle being produced beyond the spikelets into a more or less rigid point. From the Chlorideæ they are separated by the articulation of the pedicel below the spikelet.

Exceptional cases presenting this leading character of the Paniceæ, *i. e.*, the articulation of the pedicel below the outer glumes, occur in Poaceæ and in other tribes besides Chlorideæ, and may not *Spartina* form an exception here? There are exceptions also to the character cited by Mr. Bentham as separating the Chamæraphææ from the paspaloid *Panica*. In *Panicum tenuiculmum*, Chapman, (non Meyer) from Florida, and in the East Indian *P. mucronatum*, Roth. (two species which may prove to be identical) the rhachis of the lateral spikes or racemes is prolonged beyond the spikelets into a rigid, subulate mucro or point.

Without entering further into the question respecting the proper position of *Spartina*, which I feel in no wise competent to discuss, I would like to record here a few cases of abnormally developed spikelets of one species of this genus that have come under my notice, drawing no conclusions more than to state that my observations have led me to regard *Spartina polystachya*, Willd., rather as a variety of

S. cynosuroides, Willd., than as a distinct species. The characters based upon the spikelets alone are not sufficient to separate them.

The spikelets represented in Figures 1 and 2 of Plate xxxvi. were taken from a specimen of *S. cynosuroides* collected at the outlet of Moosehead Lake, Maine, by Messrs A. H. and C. E. Smith in 1868. The spikes of the plant are unusually long peduncled and very loosely flowered, but that it is an abnormal growth is well shown by the spikelets represented.

Figures 3, 4 and 5 were drawn from spikelets of a specimen in the herbarium of Mr. Wm. M. Canby, collected at Atlantic City, New Jersey. In habit the plant was like *S. polystachya*. Figure 5 represents a double spikelet which has two upper outer glumes with but a single lower one. Nearly all degrees of cohesion were to be found in different spikelets on the plant.

Figures 6, 7, 8 and 9 illustrate in detail a two-flowered spikelet taken from a specimen of *S. cynosuroides* collected in Oregon by E. Hall. Most of the spikelets were normal, but all degrees in the development of a second floret were exhibited by others, the one here illustrated being the most complete. In some the opposing edges of the pales of the two flowers were united for nearly their entire length. Fig. 6 shows the 2-flowered spikelet complete. Fig. 7 exhibits the outer glumes. Fig. 8 shows the two florets removed from the outer glumes. Fig. 9 shows the florets separated.

New Western Compositæ.

By EDWARD LEE GREENE.

BRICKELLIA CEDROSENSIS.—A low shrub, with ascending, leafy branchlets bearing usually a solitary head; larger leaves a half-inch long, triangular ovate, coarsely and sharply toothed, on short petioles; those of the branchlets narrower and mostly entire, all roughish pubescent; heads 12–18-flowered; involucreal scales acute; akenes smooth; pappus finely barbellate.

Collected on the Cedros Islands many years since by Dr. Veitch, and preserved in the herbarium of the California Academy. The species is allied to *B. frutescens*, Gray, of the main land, north-east of the islands, which has entire, veinless leaves, and heads with more numerous flowers.

BÆRIA CARNOSA.—Simple, or more or less branched from the base; the root somewhat fusiform-thickened, but strictly annual; stems a span high, slender but wiry, purple, and sparsely clothed with rather webby, white hairs; leaves wholly glabrous, narrowly linear, subterete and, with the involucre, thick and succulent; involucre campanulate, their large fleshy scales marked with a prominent, keel-like midrib; akenes roughish; pappus of 5 ovate, acuminate, chaffy scales which taper into a long slender awn.

Collected by the writer on the border of a salt marsh at Vallejo, April 15th, 1883. A most remarkable species, as to its succulent herbage, recalling certain similarly fleshy, maritime species in other genera of compositæ, as, for example, *Layia carnosa*, H. & A.

LAGOPHYLLA CONGESTA.—Near *L. ramosissima*, but the stouter

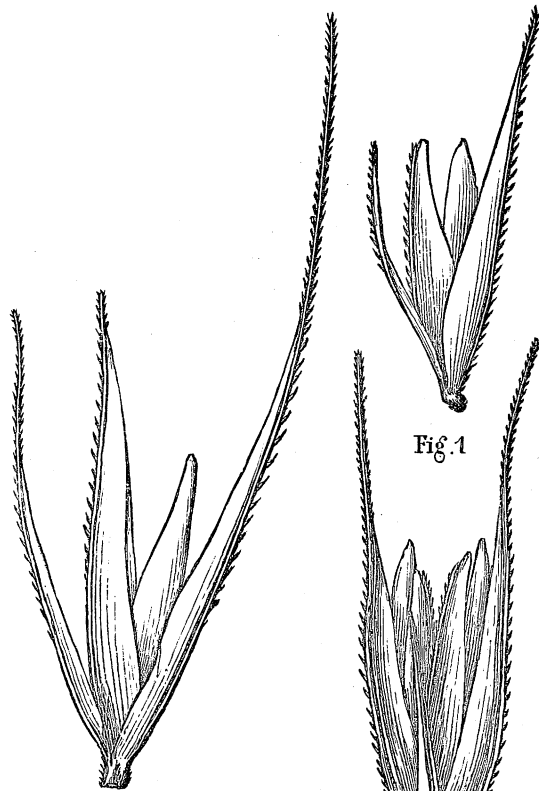


Fig. 1

Fig. 2.

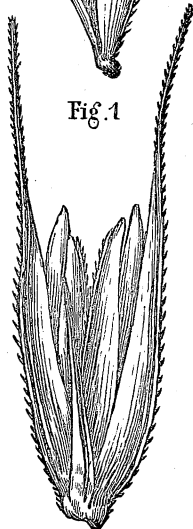


Fig. 5

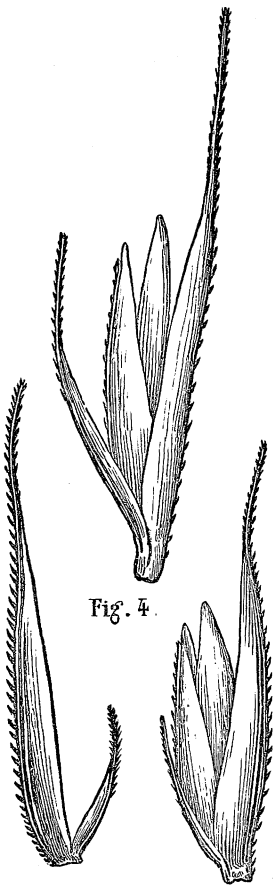


Fig. 4.

Fig. 7

Fig. 3.



Fig. 6



Fig. 8.

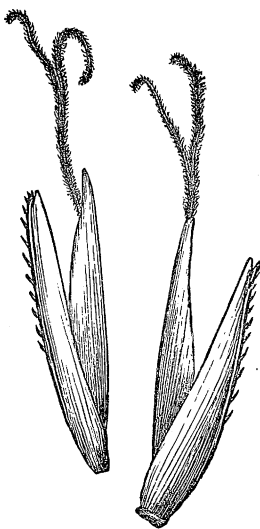


Fig. 9.